

Use of E-resources by the Medical Students of M.M. University, Ambala: A Case Study

Rajender Kumar

**DAV College, Sadhaura, Yamuna Nagar Haryana- 133 204
E-mail: rajmlis@yahoo.co.in*

ABSTRACT

This paper reports usage and experience of e-resources medical students at Maharishi Markandeshwar University, Ambala Haryana. In this study it is try to verify and evaluate the purpose, frequency, reasons of using and place of students access to e-resources. A well structured questionnaire was administered to the 100 medical students. The response rate was 78% (45 from Postgraduates and 33 from Undergraduates students). The result of study reveals that most of P.G. and U.G. students state that e-resources are informative as well as update the medical knowledge. Search engine and medical research reports are used highly among the students. Further study shows that undergraduate students use e-resources daily and spent more time as compared to P.G. students. It is found that maximum students are aware and use e-resources of library. The satisfaction of medical students is not high with regard to e-resources. Study also reveals that PG students feel that e-resources are time consuming and face slow downloading whereas UG students face virus, slow downloading and feel more expensive of using e-resources.

Keywords: E-resources, use of e-resources, e-journals, Medical Student, M.M. University

1. INTRODUCTION

The developments in computing technology changed in all fields of education with transacting of information society to the digital world where people access and use information every day faster and easier. E-resources have become highly important learning and teaching aids in almost every field of science. It has created a great revolution in the field of medical publication, data storage and retrieval as a new medium. In medical education, they are of particular interest for the study of anatomy. In this field, the availability of visual information is essential to obtain a functional three-dimensional (3D) image of the human body and its tissues¹. The tremendous growth of medical information publication available in various formats as fast as possible is needed which definitely requires information and communication technology. In order to work in compliance with this evolution, medical students need the awareness, skills for management of information and communication effectively and efficiently and the ability to utilise various facilities and equipment in the electronic databases².

Also, with development of e-resources collection in various universities are growing, presently we see the increasing demand of e-resources by medical students in the competitive time of education and research in all over the world. E-resources have become as boons to the medical students and

attract them in the digital environments in their limited amount of time. Use of e-resources by medical student may up-to-date knowledge in their respective subject field and to improve the quality of learning, growing rapidly and play a vital role in education and research.

Medical students today are very comfortable with electronic resources that have become an integral part as well as facilitate self-directed learning among them. With the rising use of e-resources in higher education, an ever-increasing amount of research has been conducted into its educational value. However, such research has been found to focus on student usage pattern of e-resources. When developing e-resources in medical education, student need to understand not only their academic value, but also how they use and experience of e-resources. Students need more guidance of the limits of individual logs to a source of information and more assistant to access the clinical data of broader resources such as databases³.

1.1. Maharishi Markandeshwar University

Maharishi Markandeshwar University, Mullana - Ambala has become a symbol of quality education in technical, professional and medical streams in northern India since its establishment in 2007. The University now comprises to Engineering College; Institute of Computer Technology & Business Management

(MCA); College of Dental Sciences & Research; Institute of Physiotherapy & Rehabilitation; Institute of Computer Technology & Business Management (Hotel Management); Institute of Medical Sciences & Research; Institute of Management; College of Nursing; College of Pharmacy; and Institute of Nursing. These institutes are also approved by the regulatory bodies like Medical Council of India, Dental Council of India, Indian Nursing Council, Indian Association of Physiotherapists, and All India Council for Technical Education. Presently University offers under-graduate, post-graduate and doctoral degree of all the above running courses.

M.M. University is having more than 14 Libraries in its fold with the seating capacity of 1500 users at a time. The Libraries of the Campus are air conditioned, computerised and Bar-code employed with Library Management software (SOUL). The available reading materials, i.e., books, CD's, videos, thesis, standards and back volumes are 155388 in number with 30520 numbers of titles and subscribe 5078 journals as well as online database, i.e., Lippincott Williams & Wilkins e-collection, EBSCO-Management, IEEE, ASME, ASCE, Bentham Science, EBSO Dentistry and Gale Info Trac Medical Collection direct from the publishers as well as from the aggregators. MEDLARS is accessible to all users of Medical Science. The libraries are also a member of NPTEL, INFLIBNET and DELNET library network.

2. LITERATURE REVIEW

Bhatti & Javed⁴ found that the e-resources were used sometimes (Pubmed) and occasionally (MedScape, PakMediNet and EBSCOhost) with second preference of the students due to scarcity of ICT infrastructure as well as lack of digital literacy among students. Bhat & Mudhol⁵ observed that Anesthesiologist had the first position of satisfaction with all search engines. General medicine and Neurology respondents used e-resources mostly. The study also found that e-resources accessed more and more at departments or on personal desktop/laptops by respondents that seem to be decreased the value of libraries as gateway of e-resources in future. Sohail & Alvi⁶ concluded that 100 % of the students were aware and used for retrieving quick information of web resources as reliable resources generally in cyber cafe as well as with personal connection and satisfied with the web services provide by college. Singh & Gill⁷ found that maximum numbers of respondents were aware availability of e-journals and used pdf format for their research work at their office daily. Varghese, *et al.*,⁸ had pointed out that 98 % of students used the e-resources frequently to varying that usefulness, to prepare for periodic formative and final summative assessments in the course as well as to

understood the subject (83 %), to answer questions in assessments (86 %), to study the subject (59 %) and biochemistry interesting (73 %). Maharana, *et al.*,⁹ found that 1/3 of the students have a long experience of using internet and e-resources from 2-4 years and all are more or less aware of the applications of internet technology. Thanuskodi¹⁰ had carried out a study and found that CD-ROM medical database on Highwire Press and PubMed were the first preference of the medical professionals with mean score of 4.15 and faced the problems of virus, lack of information technology (IT) knowledge, long time to view information, slow accessibility, lack of time and too much information retrieved. Graber, *et al.*,¹¹ explored that medical students spent significantly more time on the case than did the other students ($p < 0.05$) by used google for research and solve the CPC cases, followed by Isabel, eMedicine. Johnson¹² examined the significant difference ($P < 0.002$ using a two-tailed unpaired t-test) and describe that online preparation for high-stakes examinations could improve student performance in medical microbiology. Gilmour, *et al.*,¹³ found that most respondents had internet access at home to improve the practice and to expressed the quality of online information. Scott, *et al.*,¹⁴ investigated the e-learning asthma resource was a useful supplement to the paediatric asthma lecture and workshop that helpful to improve clinical practice. Romanov & Aarnio¹⁵ did a survey and found that MEDLINE bibliography database is used by medical students for study (24 %), research (32 %) and for scientific work (32 %) Terveyspotti. Renwick¹⁶ observed that respondents had high awareness of the electronic resources out of which 73 % used computers daily, 83 % were self-taught and 60 % expressed a need for training. Dorup¹⁷ conducted a survey and found that computer and internet was used at home by the respondents of 71.7 % and 60 % respectively. 90 % students used e-mail regularly, 80 % used the internet regularly.

3. OBJECTIVES

The objectives of the study are to:

- (a) Identify the type of e-resources used by the medical students;
- (b) Find out the search patterns used by students for accessing e-resources;
- (c) Know the purpose of using e-resources by the medical students;
- (d) Find out the reason for the use e-resources;
- (e) Know the frequency and time spent while using of e-resources;
- (f) Know the place of access to e-resources by medical students;

- (g) Know the awareness about the e-resources;
- (h) Know the satisfaction level of medical students with e-resources; and
- (i) Identify reasons for not using e-resources by medical students.

4. METHODOLOGY

The study is limited to use of the e-resources by post and under graduate students of the Institute of Medical Sciences & Research at MM University of Ambala (Haryana). This study is based on survey method. The questionnaire tool was used to collect primary data from the medical students. A total 100 questionnaires were distributed randomly among medical students. Out of which 45 from postgraduates (MD/MS) and 33 from the undergraduates (MBBS) students received back with 78 % response rate. The chi-square test was used at 0.01 % level of significance to know the variation of usage e-resources among PG and UG medical students.

5. HYPOTHESES

The following null hypotheses were formulated and tested by employing chi-square statistical tool.

- H1*– There is no significant difference between the PG and UG medical students in using the various types of e-resources.
- H2*– There is no significant difference between search strategy of PG and UG medical students for accessing e-resources.
- H3*– There is no significance difference between the PG and UG students for the purpose of using e-resources.
- H4*– There is no significance difference between PG and UG students in accessing frequency of e-resources.
- H5*– There is no significance difference with regard to the satisfaction level of PG and UG students with e-resources.

6. ANALYSIS

Students were asked to locate the type of e-resources frequently used. It is clear from Table 1 that maximum number of PG and UG students frequently used search engines (18 PG and 13 UG) and E-research Report (15 PG and 20 UG). 6 of PG and 3 UG gave the preference to video to use. However, UG students did responded regarding the usages preference of e-journals, e-books, ETD, e-encyclopedia, and online databases. The calculated value of χ^2 (26.45) is greater than the critical value (18.4753), i.e., $26.45 > 18.4753$. This shows that there is significance difference among the PG and UG medical students to use the various types of e-resources; it has found that maximum

number of students used e-research reports. It is identified with the statistical analysis of Chi-square the structured hypothesis *H1* is rejected at 0.01 level of significant.

Every user has a nature to access e-resources with different approach. An attempt was made to know which approach is mostly used among PG and UG medical students. Table 2 shows that title is highly used by students (27 PG and 19 UG) to access

Table 1. Types of medical e-resources used

| E-resources | P.G. | U.G. | Total | χ^2 (df; c) | <i>p</i> |
|-------------------|-----------|-----------|------------|------------------------|----------------------|
| E-journal | 6 | 0 | 6 | 26.45* (7; 18.4753) | <i>p</i> = 0.0004 |
| E-books | 6 | 0 | 6 | | |
| ETD | 12 | 0 | 12 | | |
| Videos | 6 | 3 | 9 | | |
| E-encyclopedia | 6 | 0 | 6 | | |
| Search engines | 18 | 13 | 31 | | |
| E-research report | 15 | 20 | 35 | | |
| Online database | 3 | 0 | 3 | | |
| Total | 72 | 36 | 108 | | |

e-resources followed by subject (24 PG and 14 UG students). 23 PG students and 6 of UG students used author for accessing e-resources. The study further shows that UG students have no response the usages of DOI. The chi square is significant at 0.01 level of significance. It is indicated that there is significant variation among PG and UG student usages search strategy to access e-resources and based on the statistical result the structure null hypothesis *H2* is rejected.

Table 3 and Figure 1 shows the purpose of students to use e-resources. Majority of students, i.e., 36 of PG and 33 of UG use e-resources for updating medical knowledge, 9 of PG students and 3 of UG use for education and for research,

Table 2. Search strategies used for accessing e-resources

| Search | P.G. | U.G. | Total | χ^2 (df; c) | <i>p</i> |
|----------------------------|------------|-----------|------------|-----------------------|----------------------|
| Author | 23 | 6 | 29 | 23.7* (7; 18.4753) | <i>P</i> = 0.0013 |
| Title | 27 | 19 | 46 | | |
| Subject | 24 | 14 | 38 | | |
| Keywords | 19 | 4 | 23 | | |
| Publisher | 25 | 2 | 27 | | |
| Boolean search | 26 | 3 | 29 | | |
| Truncation/wildcard search | 8 | 2 | 10 | | |
| DOI- based search | 12 | 0 | 12 | | |
| Total | 164 | 50 | 214 | | |

Table 3. Purpose of using e-resources

| Purpose | P.G. | U.G. | Total | χ^2 (df; c) | p |
|--------------------------------|-----------|-----------|------------|-----------------------|--------------|
| For updating medical knowledge | 36 | 33 | 69 | 16.15* (9); (21.6659) | $p = 0.0638$ |
| Education | 9 | 3 | 12 | | |
| For research | 9 | 3 | 12 | | |
| Patient care | 3 | 0 | 3 | | |
| Health information | 3 | 0 | 3 | | |
| To access pubmed | 3 | 0 | 3 | | |
| Medical databases access | 3 | 0 | 3 | | |
| Entertainment | 6 | 0 | 6 | | |
| Communication | 3 | 3 | 6 | | |
| Others | 4 | 2 | 6 | | |
| Total | 79 | 44 | 123 | | |

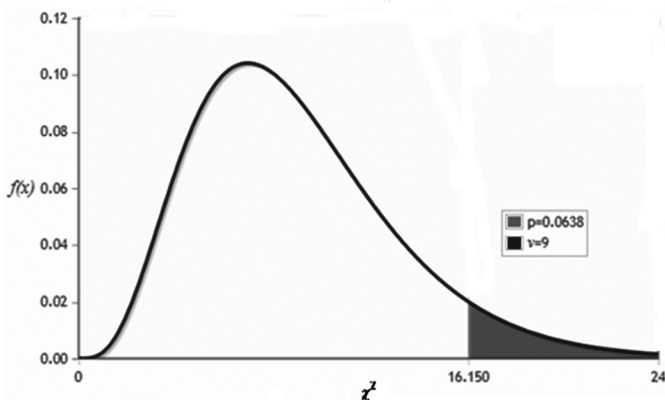


Figure 1. Chi-Square (χ^2) distribution with $v = 9$ degrees of freedom, then $p = \Pr[X \geq 16.150] = 0.0638$.

for communication equal number of PG and UG students use e-resources and 4 of PG and 2 of UG use e-resources for other purpose. Therefore, UG students have no response to the query of e-resources usages for patient care, health information, to access PubMed, medical databases access and entertainment. The calculated value of chi-square is less than critical value, i.e., $16.15 < 21.6659$. There is no significance difference between the PG and UG students purpose to use e-resources. The decision is accepted the null hypothesis H_3 .

Table 4 highlights the response of students regarding the reason for using e-resources. The data from the table describes that maximum numbers of students', i.e., 24 of PG and 30 of UG state that e-resources are more informative, 6 numbers of PG and 3 of UG students response that e-resources are time saving and more useful. It is to be noted from the table that UG students give no response to the query of easy to use and less expensive, while PG students have the opinion that e-resources are easy (12) to use and less expensive (6). The chi-square test shows that there is significant variation among the PG and UG student reason for using e-resources.

Table 4. Reasons for using e-resources

| Reasons | P.G. | U.G. | Total | χ^2 (df; c) | p |
|------------------|------|------|-------|-----------------------|--------------|
| Time saving | 6 | 3 | 9 | 17.78* (4); (13.2767) | $p = 0.0014$ |
| Easy to use | 12 | 0 | 12 | | |
| More informative | 24 | 30 | 54 | | |
| Less expensive | 6 | 0 | 6 | | |
| More useful | 6 | 3 | 9 | | |

To know the access frequency of e-resources, students were asked how frequently they use e-resources. It is clear from Table 5 that 18 numbers of PG students use e-resources daily, 21 use once a week and 6 numbers of PG students use e-resources more than once a week. Whereas UG students give the response that they use e-resources daily. Chi-square test result does not support the null hypothesis and there is significance difference between the access frequency of e-resources among PG and UG students and structured null hypothesis H_4 is rejected.

Table 5. Frequency of use e-resources

| Frequency | P.G. | U.G. | Total | χ^2 (df; c) | p |
|-----------------------|-----------|-----------|-----------|---------------------|--------------|
| Daily | 18 | 33 | 51 | 30.28* (2; 9.21034) | $p = 0.0000$ |
| Once a week | 21 | 0 | 21 | | |
| More than once a week | 6 | 0 | 6 | | |
| Total | 45 | 33 | 78 | | |

Time is important facture in the utilisation of the e-resources and the present study tries to find out the how much time is spent on the use of e-resources by medical student. Table 6 and Figure 2 reveals that quite number of PG students that is 18 access e-resources 2-4 hours in a week, 12 students access e-resources 5-6 hours in a week, 9 students access 7-9 hours in a week, each numbers of students access e-resources less than 1 hours in a week and 10-20 hours in a week. On the other hand 23 numbers of UG students' access e-resources 10-23 hours in a week, 7 students' access e-resources 2-4 hours in a week, and 3

Table 6. Time spent in using of e-resources

| Time spent | P.G. | U.G. | Total | χ^2 (df; c) | p |
|-------------------------|-----------|-----------|-----------|-----------------------|--------------|
| Less than 1 hour a week | 3 | 0 | 3 | 46.48* (5); (15.0862) | $p = 0.0000$ |
| 2-4 hours a week | 18 | 7 | 25 | | |
| 5-6 hours a week | 12 | 0 | 12 | | |
| 7-9 hours a week | 9 | 0 | 9 | | |
| 10-20 hours a week | 3 | 23 | 26 | | |
| Over 20 hours a week | 0 | 3 | 3 | | |
| Total | 45 | 33 | 78 | | |

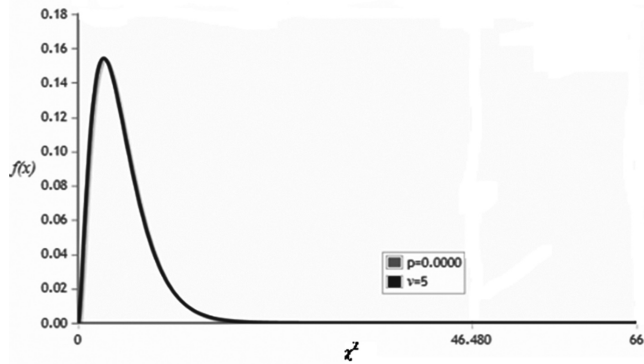


Figure 2. Chi-Square (χ^2) distribution with $v= 5$ degrees of freedom, then $p= \Pr[X \geq 46.480]= 0.0000$.

students access e-resources over 20 hours in a week. It is clear from the chi-square test that there is significance variance between time spent on usages of e-resources by PG and UG students.

Table 7 and Figure 3 shows the place of e-resources access and describes that 27 numbers of PG and 26 of UG students use e-resources at library, 15 of PG and 7 of UG students use at home. Data of the table presents that same numbers of students, i.e., 9 use e-resources at computer lab (6 PG and 3 UG) and any other place (4 PG and 5 UG), 2 PG students use e-resources at department whereas not a single UG student use e-resources at department. There is no significance variance among the access place of e-resources because the calculated value (4.34) is less than the critical value (13.2767).

It is evident from Table 8 that students were aware about the e-resources by various approach. The majority of students (15 PG and 26 UG) aware

Table 7. Place of accessing of e-resources

| Access place | P.G. | U.G. | Total | χ^2 (df; c) | p |
|-----------------|-----------|-----------|-----------|------------------|--------|
| At computer lab | 6 | 3 | 9 | 4.34* (4); | $p =$ |
| At library | 27 | 26 | 53 | (13.2767) | 0.3619 |
| At home | 15 | 7 | 22 | | |
| At department | 2 | 0 | 2 | | |
| Any other place | 4 | 5 | 9 | | |
| Total | 54 | 41 | 95 | | |

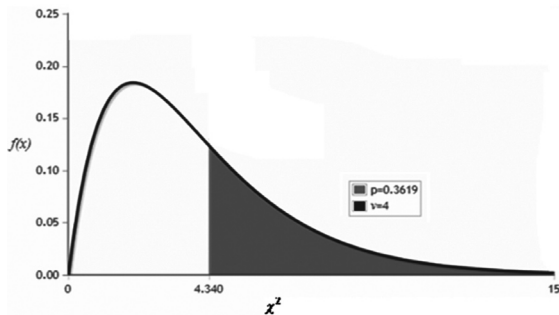


Figure 3. Chi-Square (χ^2) distribution with $v = 4$ degrees of freedom, then $p = \Pr[X \geq 4.340] = 0.3619$.

Table 8. Way of communication about the E-resources to users

| Way of commu- nication | P.G. | U.G. | Total | χ^2 (df; c) | p |
|---------------------------|-----------|-----------|-----------|------------------|--------|
| Library notice/e- mail | 15 | 26 | 41 | 29.18* (4); | $p =$ |
| From other library | 0 | 3 | 3 | (13.2767) | 0.0000 |
| Library brochure | 6 | 0 | 6 | | |
| Colleagues | 27 | 3 | 30 | | |
| Teacher | 3 | 3 | 6 | | |
| Total | 51 | 35 | 86 | | |

about e-resources from library notice/e-mail. 27 PG and 3 of UG students became aware from their colleagues, 6 PG and 3 of UG students aware about current e-resources from library brochure and other library respectively. 6 numbers of students (3 PG and 3 UG) are aware from teacher. The value of chi-square is 29.18 and degree of freedom is 4. The value of p reveals the statistically significance ($p < 4.01$). The variation among students has been found as for as awareness approach to e-resources is concerned.

Table 9 and Figure 4 indicates the satisfaction level of students with e-resources. The result of the study found that 20 of PG and 9 of UG students are very satisfied with e-resources, 12 PG and 7 UG students, i.e., 19 students are somewhat satisfied and dissatisfied are 3 of PG students and 1 of UG students. The study also found that 10 of PG and 16 of UG students gave no comments regarding satisfaction with e-resources. The chi-square test is significant at 0.01 level of significance. There is no

Table 9. Satisfaction level of students on e-resources

| Satisfaction level | P.G. | U.G. | Total | χ^2 (df; c) | p |
|--------------------|-----------|-----------|-----------|------------------|--------------|
| Very satisfied | 20 | 9 | 29 | 6.17* (3); | $p = 0.1036$ |
| Somewhat satisfied | 12 | 7 | 19 | (11.3448) | |
| Dissatisfied | 3 | 1 | 4 | | |
| No comments | 10 | 16 | 26 | | |
| Total | 45 | 33 | 78 | | |

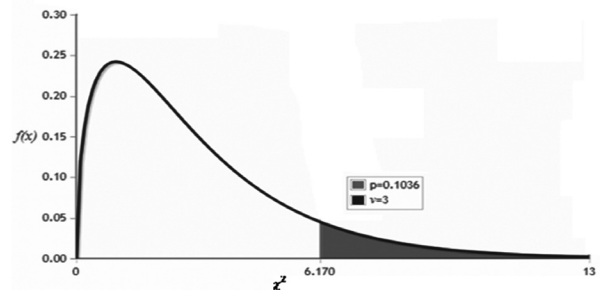


Figure 3. Chi-Square (χ^2) distribution with $v= 3$ degrees of freedom, then $p= \Pr[X \geq 6.170]= 0.1036$.

significance variation among the satisfaction level of PG and UG students with e-resources. It has been found that the calculated value is less than the critical value at 0.01 level of significant and the structure null hypothesis H_5 is accepted.

Students were requested to indicate the reasons for not using e-resources. Table 10 depicts that maximum number of PG students (21) are not using e-resources because of slow downloading this is followed by time consuming (18), 6 students are not using because of expensive nature, 3 students state that lack of subject coverage, lack of training, lack of time and 2 students did not give any reason. On the other hand UG students are not using e-resources due to it being more expensive (20), slow downloading, virus (6) any other reason (5), lack of training and time (3). There is a significance difference among the reason of not using e-resources by PG and UG students. The calculated value of Chi-square test is 39.24 greater than the critical value at 1 % of 7 degree of freedom.

Table 10. Reasons for not using e-resources

| Reason | P.G. | U.G. | Total | χ^2 (df; c) | p |
|--------------------------|-----------|-----------|------------|-----------------------------|-----------------|
| Lack of subject coverage | 3 | 0 | 3 | 39.24* (7); (18.4753) | $p =$ 0.0000 |
| Lack of training | 3 | 3 | 6 | | |
| Lack of time | 3 | 3 | 6 | | |
| Time consuming | 18 | 0 | 18 | | |
| Slow downloading | 21 | 10 | 31 | | |
| More expensive | 6 | 20 | 26 | | |
| Virus | 0 | 6 | 6 | | |
| Any other | 2 | 5 | 7 | | |
| Total | 56 | 47 | 103 | | |

8. CONCLUSIONS

Today all type of medical information is available in electronic formats. The e-resources play a drastic role among the medical students community in accessing and sharing of information. E-resources keep medical students up-to-date over traditional resources. The present study is conducted with the objective to know the e-resources usage patterns among the postgraduate and undergraduate medical students at Maharishi Markandeshwar University, Ambala Haryana. The study found significant difference among PG and UG students in relation to the use of various types of e-resources, search strategy, reason for using e-resources and access frequency except purpose. However, result shows that medical students frequently used search engines as well as e-research report by title and subject of the required information for updating medical knowledge.

The result of the study shows that maximum medical students state that e-resources are more

informative. All the undergraduate students use e-resources daily and spent more time than the postgraduate students. It is interesting to note that a large number of students are aware of the e-resources from library notice/e-mail and colleagues, and use library to access the e-resources. The result of the study found that the satisfaction level was not high among PG and UG students on usage of e-resources.

The study also finds out the major problems PG students feel for using e-resources are time consuming and face slow downloading whereas UG students face virus, slow downloading and feel that using e-resources makes it more expensive. To develop a fully e-educational environment and reducing the problems of students, it is needed to develop a modern digital infrastructure. It is evident from the study that medical library of Maharishi Markandeshwar University is leading to create environment for the attraction of the students. Therefore, much more is need to be done to make maximum access of e-resources. E-resources are easy to access at any place any time, provide right information at right time, and have become widely used tools in medical literature and patient care education today as well as have benefits over traditional educational resources. Every academic Institute provides different facilities and services to its students. Library is one of the most important facilities among students to grow the carrier.

REFERENCES

1. Jastrow & Umer. On the use and value of new media and how medical students assess their effectiveness in learning anatomy. *The Anatomy Record Part B: The New Anatomy*, 2004, **280B**(1), 20-29. <http://onlinelibrary.wiley.com/doi/10.1002/ar.b.20027/epdf>
2. Anaraki, L.N. & Babalhavaeji, F. Investigating the awareness and ability of medical students in using electronic resources of the integrated digital library portal of Iran: A comparative study. *The Electronic Library*, 2013, **31**(1), 70-83.
3. Lai, N.M. & Nalliah, S. Information-seeking practices of senior medical students: The Impact of an evidence-based medicine training programme. *Education for Health*, 2010, **23**(1), 151. <http://www.educationforhealth.net/>
4. Bhatti, Rubina & Javed, Muhammad Waqas. Experience of internet utilisation by post graduate students at Nishter Medical College, Multan, Pakistan. *Lib. Philo. & Prac. (e-journal)*, 2014. <http://digitalcommons.unl.edu/libphilprac/1081>
5. Bhat, Iqbal & Mudhol, Mahesh V. Use of e-resources by faculty members and students of Sher-e-kashmir Institute of Medical Science (SKIMS). *DESIDOC J. of Lib. & Inf. Tech.*, 2014, **34**(1),

- 28-34.
6. Sohail, M. & Alvi, A. Use of web resources by Medical Science Students of Aligarh Muslim University. *DESIDOC J. of Lib. & Inf. Tech.*, 2014, **34**(2), 125-30. <http://www.amu.ac.in/newdata/depttmom/8769.pdf>
 7. Singh, K.P. & Gill, Malkeet Singh. Use of e-journals by medical professionals: A study of Indian Council of Medical Research (ICMR) libraries in Delhi. *Lib. Phil. & Prac. (e-journal)*, 2012, Paper 810. <http://digitalcommons.unl.edu/libphilprac/810>
 8. Varghese, *et al.* Impact of e-resources on learning in biochemistry: First-year medical students' perceptions. *BMC Medical Education*, 2012, **12**(1), 21. <http://www.biomedcentral.com/1472-6920/12/21>
 9. Maharana, Bulu, *et al.* Use of internet and e-resources by the students of business management: A survey of PG students of business administration, Sambalpur University, India. *Inter. J. of Lib. & Inf. Sci.*, 2010, **2**(3), 45-53. <http://www.academicjournals.org/ijlis>
 10. Thanuskodi, S. Use of internet and electronic resources for medical science information: A case study. *J. of Comm.*, 2010, **1**(1), 37-44.
 11. Graber, Mark L., *et al.* Resources medical students use to derive a differential diagnosis. *Medical Teacher*, 2009, **31**(6), 522-27.
 12. Johnson, Mary T. Impact of online learning modules on medical student microbiology examination scores. *J. of Micr. & Bio. Edu.*, 2008, **9**, 25-29.
 13. Gilmour, Jean A. *et al.* Nurses and internet health information: A questionnaire survey. *J. of Adva. Nur.*, 2008, **61**(1), 19-28.
 14. Scott, Karen, M. *et al.* Medical student use of an online formative assessment resource. *In Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008.* http://www.ascilite.org.au/conferences/me_lbourne08/procs/scott.pdf
 15. Romanov, Kalle & Aarnio, Matti. A survey of the use of electronic scientific information resources among medical and dental students. *BMC Medical Education*, 2006, **6**(28). <http://www.biomedcentral.com/1472-6920/6/28>
 16. Renwick, Shamin. Knowledge and use of electronic information resources by medical sciences faculty at The University of the West Indies. *J. of the Med. Lib. Asso.*, 2005, **93**(1) 21-31.
 17. Dorup, Jens. Experience and attitudes towards information technology among first-year medical students in Denmark: Longitudinal questionnaire survey. *J. of Med. Inte. Res.*, 2004, **6**(1). <http://www.jmir.org/2004/1/e10/>

About the Author

Mr Rajender Kumar is working as Librarian, DAV College, Sadhaura, Yamuna Nagar, Haryana. Prior to this, he has worked with Panipat Institute of Engineering & Technology, Panipat and Galaxy Global Group of Institutions, Ambala. He has about 10 years experience in LIS field. He has done MLIS, MPhil and qualified UGC-NET. Presently, he is pursuing PhD in Library and Information Science. He has contributed 27 research papers in national and international journals and conference proceedings. His areas of interest include: ICT application, digital library, and e-resources management.